

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claims 10 and 11 without prejudice.

Listing of Claims:

1. (Cancelled)
2. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:
 - a printing fluid reservoir configured to hold a volume of the printing fluid;
 - a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and
 - a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode includes an electrically conductive coating disposed over an electrically conductive substrate made at least partially of a material selected from the group consisting of stainless steel, gold, palladium, activated carbon, carbon black, carbon fiber cloth, graphite, glassy carbon, carbon aerogel, and cellulose-derived foamed carbon.
3. (Original) The printing device of claim 2, wherein the graphite is a graphite powder or a graphite cloth.

Page 2 - AMENDMENT
Serial No. 10/632,081
HP Docket No. 10019128-1
KH Docket No. HPCC 394

4. (Previously Presented) The printing device of claim 2, wherein the substrate is made at least partially of a carbon material modified by a technique selected from the group consisting of liquid-phase oxidations, gas-phase oxidations, plasma treatments, and heat treatments in inert environments.

5. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, wherein at least one of the first electrode and the second electrode includes an electrically conductive coating disposed over an electrically conductive substrate, and wherein the electrically conductive coating is permeable to printing fluid and is configured to increase the effective surface area of the electrode accessible to the printing fluid.

6. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode includes an electrically conductive coating made at least partially from an electrically conductive polymer, and disposed over an electrically conductive substrate.

7. (Original) The printing device of claim 6, wherein the electrically conductive polymer is selected from the group of electrically conductive polymers consisting of polypyrroles, polyanilines, polythiophenes, conjugated bithiazoles and bis-(thienyl) bithiazoles.

8. (Original) The printing device of claim 6, wherein the electrically conductive polymer is cross-linked.

9. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode includes an electrically conductive coating resistant to corrosion by printing fluid disposed over an electrically conductive substrate.

Page 4 - AMENDMENT
Serial No. 10/632,081
HP Docket No. 10019128-1
KH Docket No. HPCC 394

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) The printing device of claim 9, wherein the first electrode and second electrode are disposed at least partially within the printing fluid reservoir.

13. (Previously Presented) The printing device of claim 9, further comprising a conduit fluidically connecting the printing fluid reservoir to the print head assembly, wherein the first electrode and the second electrode are disposed at least partially within the conduit.

14. (Previously Presented) The printing device of claim 9, wherein the print head assembly includes a print head assembly reservoir configured to be periodically refilled with printing fluid from the printing fluid reservoir, and wherein the first electrode and the second electrode are disposed at least partially within the print head assembly reservoir.

15. (Previously Presented) The printing device of claim 9, wherein both the first electrode and the second electrode are coated with the electrically conductive coating.

16. (Previously Presented) The printing device of claim 9, wherein the electrically conductive coating is a protective polymer coating, further comprising a printing fluid-permeable electrically conductive polymer coating disposed over the protective polymer coating.

17. (Cancelled)

18. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is in fluid communication with the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, wherein at least one of the first electrode and the second electrode includes an electrically conductive coating permeable to printing fluid disposed over an electrically conductive substrate, and wherein the electrically conductive coating includes a plurality of interior surfaces contactable by the printing fluid.

19. (Original) The printing device of claim 18, wherein the electrically conductive coating is porous.

20. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is in fluid communication with the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one

of the first electrode and the second electrode includes an electrically conductive coating at least partially made of a polymer, permeable to printing fluid the electrically conductive coating being disposed over an electrically conductive substrate.

21. (Original) The printing device of claim 20, wherein the polymer is selected from the group consisting of polypyrroles, polyanilines, polythiophenes, conjugated bithiazoles and bis-(thienyl) bithiazoles.

22. (Original) The printing device of claim 20, wherein the polymer is cross-linked.

23. (Cancelled)

24. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is in fluid communication with the printing fluid reservoir;

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode includes an electrically conductive coating permeable to printing fluid disposed over an electrically conductive substrate; and

an electrically conductive protective coating disposed between the electrically conductive substrate and the electrically conductive coating permeable to printing fluid, wherein the protective coating is at least partially made of a TEFLON material.

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Previously Presented) The printing device of claim 16, wherein the printing fluid-permeable electrically conductive polymer coating is made at least partially of a material selected from the group consisting of polypyrroles, polyanilines, polythiophenes, conjugated bithiazoles and bis-(thienyl) bithiazoles.